

BMHA Newsletter

BICYCLE MOBILE HAMS OF AMERICA



Volume 6, Number 4

Oct/Nov/Dec 1995

THE NOTEPAD

Important Matters, Excuses, etc.

We now have a member from Australia: Jules Corben, VK2EXT, of Oakley in New South Wales. Welcome, Jules! (More about Jules and cycling Down Under in the next issue.) As you know, we also have members in Germany, Israel, and the Netherlands. If you're planning to visit these countries, with or without bicycle, get in touch with these foreign members. They'll be happy to provide local information about the best bike routes, and about ham operations, etc.

Excuse for this issue being late: Summer snow storm on Sept 20th causes big power outage. Denver newspaper headlines: "SURPRISE STORM DAMAGES A MILLION TREES. 45,000 homes face night without electricity after worst outage in 30 years." My home (and PC) in nearby Boulder without power for 2 days. Huddled around woodstove. Next two days spent cleaning up tree limb damage caused by 8" of heavy, wet snow—in the Summer!



Why and where are they grinning and waving?
See page 3.

BMHA Gets Ink.

Don't miss the article on page 69 of the August '95 issue of *QST*. John Allen, AA1EP, has written an excellent piece titled "A Simple 2-Meter Bicycle/Motorcycle Mobile Antenna". John writes that he got the idea from Herb (WD8DLQ) Perrine's article in the *BMHA Newsletter*, April 1994, and goes on to do a complete how-to on a J-pole mounted on a fiberglass bicycle safety flag. A sidebar on Bicycle Mobile Operation ends with a nice plug for the Bicycle Mobile Hams of America. As a result, we've had over 30 requests for info and gained, so far, seven new members. Thanks, John.

Worldradio quotes the *BMHA Newsletter* in a recent issue. If Charlotte L. Johnson, KC5KWI, will look at page 53 of WR's September issue, she'll see her letter—the one that we ran in our last issue, about how her ham radio brought help when she took a bad bike fall. The ham mag editors really do read the newsletters that we send them.

Treasury Report
Fiscal year, July 1, 1994 to June 30, 1995.

Beginning bank balance:	3,046.62	
Monies received:	<u>3,315.25</u>	
Total:		6,361.87

Expenses:		
Printing and Xerox:	954.02	
Postage:	836.15	
Office supplies & expenses:	369.56	
Miscellaneous:	<u>196.07</u>	

Total Expenses: 2,355.80

Bank balance on hand, June 30, 1995: \$4,006.07

Department of Correction and Apologia

In the last listing of new members we treated Harold Gillespie as if he were a non-ham. Not true. In fact, Harold has an advanced ticket and the neat call of KK5OK. He writes that he was first licensed in 1941!

The correct Email address of Eugene Nowlan, N2TPT, of Corning NY is nowlan_ed@corning.com.

The correct Email address of Roger Wilcox, W8OZY, of Willoughby OH is bl593@cleveland.freenet.edu.

Made a horrible blunder in the last issue: It's Joe Walker, not Joe Malone, who's leading the team attempting to set a trans-U.S. record for 70+-year-old cyclists. (See the follow-up on page 3.)

Sorry, gentleman.

Attention, NONham members! By now you will have received a special mailing from the ARRL of their "prospective ham package", info on the wonders of hamming, along with a personalized printout of ham clubs, classes, and exams in your area. This courtesy arranged by ARRL's Educational Activities Manager, Rosalie White, WA1STO, who is a regular reader of the *BMHA Newsletter*. This should help you get started toward getting your amateur radio license!

—Hartley Alley, NAOA, Editor

ANTENNAS

Modeling Can Optimize Your Bike Antenna

Computer simulations can show you how to optimize your bike-mounted antenna. Here is my story with a 2-meter antenna, but you can do the same modeling for any frequency of interest from HF to VHF, UHF, or beyond.

Antenna programs (I used the software called EZNEC, see information at the end of the article) can accurately model antennas attached to a bike frame, including effects from being close to the ground. With this information you can create the best possible antenna and understand its radiation pattern and feedpoint impedance.

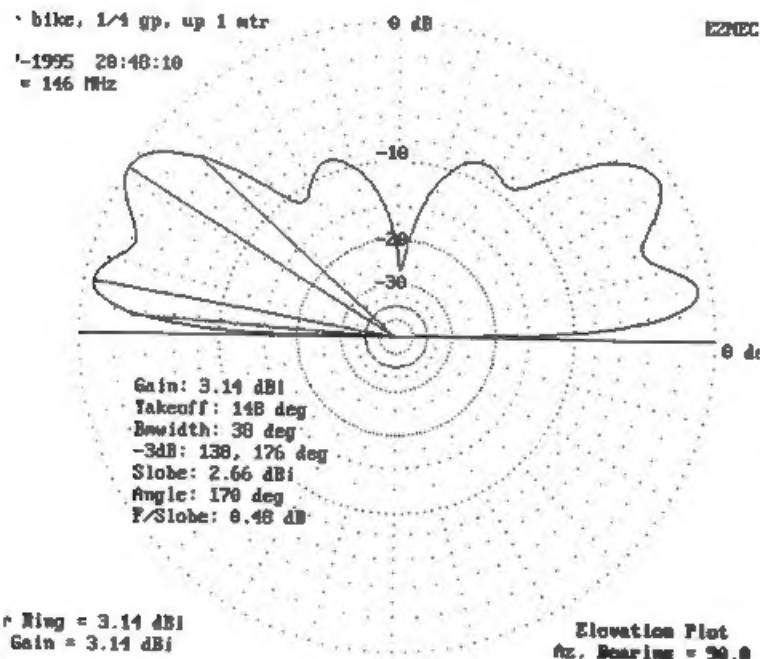


FIGURE 1: An Example Antenna Pattern.
"2 mtr bike, 1/4 gp, up 1 mtr" Freq:146

Tip #1: Get a good impedance match by using one or more simple radials in addition to the bike frame.

Using a 1/4 wave antenna against the bike frame alone (no radials) creates an impedance which is very difficult to match ($324 + j64$) and has a bad radiation pattern. Adding one (or better, two) 1/4 wave radials slanted down at 45 degrees creates an impedance which can be driven directly with 50 ohm coax.

Tip #2: A 1/4 wave vertically polarized antenna is best overall.

This is the simplest antenna to install. It does not become unwieldy on the bike or whip around. It is stronger mechanically than the popular 5/8 wave antenna, and has an impedance which is much easier to match.

Tip #3: The higher off of the ground, the better. Especially for reaching distant repeaters.

The higher off of the ground an antenna is mounted, the lower the angle of radiation—hence better distant repeater coverage. For a ground-plane antenna mounted one meter above the rear end of a bike rack, the low angle gain is slightly greater

than an antenna mounted directly on the rack (about 1-2 dB). This is better gain, but probably not worth the trouble of mounting the antenna on a broom handle—but it might get it out of the way of bike bags on the rack, and away from the rider.

The Model:

A bicycle frame and antenna are easy to model as a connected set of straight elements. This ignores the effect of wheels, spokes, and the human body, but experience has shown the calculated results to be quite useful.

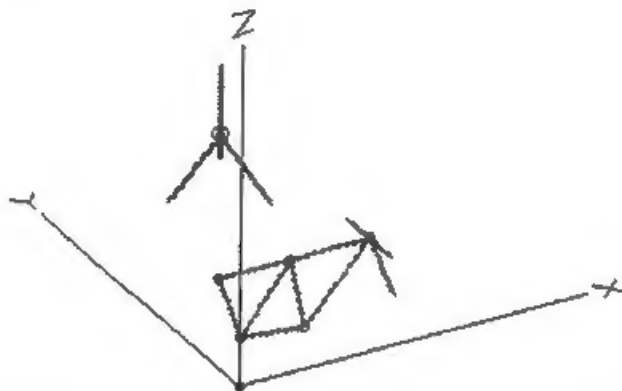


FIGURE 2: A 1/4 wave antenna, with two radials, located 1m above the bicycle frame.

The Program:

I used EZNEC, a modeling program available from Roy Lewallen, W7EL. Roy's address is P.O. Box 6658, Beaverton, Oregon 97007. Roy charges \$89 for the program. Have fun modeling and building bike mobile antennas.

—Richard Kiefer, KODK
1727 Hawthorn Place
Boulder CO 80304

NEW HAMs

Two More Members Now Have Tickets!

They hit the books, sweated, and got nervous at the exam site—just as we all did. But they passed! And probably came away thinking it wasn't so tough after all. Since the last issue these members have become licensed hams:

Rodli Pederson, KB0RLS, Valley City, North Dakota
Elwynn Miller of E. Sandwich, MA, who has passed his exams and is awaiting his ticket.

In one giant leap, member Pamela Paris of Auburn WA has upped from Tech to Extra. Her new call: AB7EQ.

Non-ham BMHAer's, please send in your call sign as soon as you get your FCC amateur radio license. We'd like to list you in this column. If you have time, tell us how and what you studied, what helped you to pass the test. We'll pass it on to our non-ham members who are thinking about taking the exam.

TRAVEL & ADVENTURE

60+ Duo Crosses US in Great Style

Editor:

Several months ago we senior types (Ann 60, Stan 66) wrote you we were biking across the US, unsupported, from Seattle, WA to Bar Harbor, ME. **WE MADE IT!!** We left Seattle May 31 and arrived near Bar Harbor August 4. We rode 3724 miles in 66 days (60 days of actual riding). Ham radio provided increased safety and greatly added to the quality of the trip. Ann used the Yaesu FT11R and I used the Yaesu FT470, working simplex while riding. The radios, with rubber duck antennas, were placed in the net pockets of the handle bar bags. We found the in-the-ear microphone and speaker (Eartalk CT 221) to be excellent. We used Velcro to hold the push-to-talk button on the handle bars, thus allowing good two-hand control of the bike while transmitting.

Two problems did occur. On remounting the bike it's easy to forget to put the ear piece back into the ear, and being quite fragile it can be destroyed in the spokes. (We lost one this way). Also, one push-to-talk switch got wet in the rain resulting in a continuous transmit condition, thus we couldn't use it until it dried out. After that, on rainy days we placed the radios and switches in plastic bags, stored inside our handlebar bags.



Observing the tradition, Ann and Stan dip their wheels in the Atlantic.

Although we didn't see any BMHA members, on two occasions hams recognized our 2-meter rigs, stopped us, and offered us a place to stay. We were not ready to quit for the day but their directions were very helpful and ham friendship was well received.

Our route was quite direct. We used Adventure Cycling maps from near Anacortes, WA to Stillwater, MN. We then cut across Wisconsin to visit friends, took the ferry across Lake Michigan (Manitowoc, WI to Ludington, MI), crossed Michigan and entered Ontario at Port Huron. We entered NY at near Niagara Falls (Lewiston bridge) and picked up the Adventure Cycling map route again at Fulton, NY. The way to go transcontinental is bicycle-mobile!

—Ann (KBORCD) and Stan (KD6OG) Nelson
2012 W. 49th Terrace
Westwood Hills, KS 66205

70+ RAAM Ride Comes to an End

(As reported in the last issue, BMHA member Joe Walker, 72, was heading a team of 70+-year-old cyclists attempting to cross the US in record time. As a part of the Race Across America (RAAM), a four-man team was to ride in relay fashion (one hour on the bike, one hour off, etc.) in an attempt to better the Masters division record of 8 days 15 hours. A portion of Joe's report follows.)

Day One: Despite losing three crew (non-cycling) members and having last-minute substitutions to our riding team, we pedaled out of Irvine CA as scheduled on Sunday, July 30th, 9 a.m.

The desert was HOT -- 100 plus through Palm Springs, Indio, climbing "The Hill" to Blythe. From Indio to Blythe we climbed to 2,500 ft and then down to 200 ft. at Blythe. Then it was night, still hot, in the 80s.

Day Two: Monday. The trip across Arizona going northeast towards Flagstaff was uneventful but the heat remained with us. Through the night, to take advantage of cooler temperature we revised our schedules so that we rode 1-1/2 hour shifts. Before Prescott, our route was over Yarnell Pass, which was a 3,000 ft. climb to a height of 6,000 ft. However, the two riders on this leg, Vere Bellian and Mark Newsome, went up THE HILL with

Day Three: Tuesday, August 1st. Joe Walker and Mark Newsome made up the team to ride the morning shift and they did their one-hour-on and one-hour-off from northeastern Arizona to Cortez, Colorado, expecting to be relieved at the Cortez checkpoint. They were not relieved as scheduled. Our radio communication became spotty because of the mountains, but Joe and Mark continued plugging along as dusk turned to evening and the two of them became tired and more tired and more tired, still without relief.

It was not learned until 10 p.m. Tuesday night that the motor home with the two relief riders and five crew members aboard was involved in an accident outside of Mexican Waters, AZ at about 10:00 that morning. **LUCKILY, NO ONE WAS INJURED.** The motor home could not be used and had to be towed. At 10:30 p.m. we were finally reached by radio between Bayfield and Chimney Rock, Colorado and were told to turn around. We went back to Durango to spend the night at the Holiday Inn.

On Wednesday a.m., August 2nd, we critiqued what had happened and our options. Though the two riders who had ridden all day Tuesday were naturally exhausted, all of the riders wanted to continue the 70+ Adventure. However, two of the crew members announced, because of the accident, they did not want to continue. At which point, we were left with a crew of five and realized it would take an additional 24 hours to replace the motor home, which would leave us out of the running.

With more than 30% of the 2900 miles completed and 5 hours ahead of our planned scheduled time, the heartbreaking decision to disband was made....with the thought, hope, and plan to go back to square one and ride again next year.

—Jos. J. Walker
Ride Across America
P.O. Box 17867
Encino, CA 91416-7867

GETTING STARTED

(This column, a source of info for the beginning ham/cyclist and now a regular feature, is compiled and edited by Bill Paul, KD6JUI. If you have suggestions or articles for GETTING STARTED, send them to him at 337 Estrella Way, San Mateo CA 94403.)

How Disaster Led to the Invention of Double-Duty Earphones

As I sit here filling out the BMHA new member questionnaire, I notice the question about writing an article for the newsletter and think, "What could I tell these experts in Bicycle-Mobiling?"

I started modestly enough in Washington D.C. 15 years ago with a six-channel, crystal-controlled CB radio. I used to take it up on Skyline Drive during the tour the Baltimore Bicycling Club held every year. I was able to contact my wife who was driving a sag for the tour and it was as useful as it could be, before the skip rolled in.

Since I had had the CB experience, I knew bicycle-mobiling was possible, so I jumped at the chance to join BMHA at the Dayton national hamfest. I had just bought a 2-meter HT the day before. I didn't even know how to set the memories at that point. The next few weeks were full, because the weekend after Dayton I left for New Orleans on my other two-wheeled vehicle (I motorcycle-referee for United States Cycling Federation races.) I arrived in time for the Great Flood and had a good chance to hear the use of ham radio on 2 meters during an emergency. That made me glad I had decided to get my ticket.

On my arrival back, I remembered that our ham club was scheduled to provide communications for a "Walk for Children" in our community. I didn't make the club net but I headed over with my bicycle because I figured it might be useful to be bicycle-mobile. I was right: half the route was on a bicycle/walking path.

I had a ANLI S1 antenna with a clip mount attached to my aero bar. Also attached to the aero bar was a rear rack bag containing an HT and a remote mike. A set of earphones was tie-wrapped to my helmet. That allowed the two "speakers" to be an inch or so from my ears.

Disaster Leads to Happy Solution

During the event, I had a chance to test the durability of my three-week-old radio. In an effort to catch up with the lead walkers, I really cranked on. At about 20 miles per hour the bag came off the handlebars, dumping the radio on the street! Because the HT didn't come loose from the antenna coax it was dragged down the street while I did an emergency stop routine. I was afraid to look, but then I heard it talking to me! The next thing was to test the transmitter. Believe it or not, it worked fine.

This leads me to the point of offering my ideas for a better system. Since I'm a road bike rider, and never ride without a cycling jersey, I think the rear pocket of the jersey is a good place for an HT. One of those backpacks some of the hams were wearing at Dayton would be even better. I could clip-mount my antenna on the top of my helmet and use a remote mike.

For my present setup I removed the headband from a set of headphones and had my wife crochet covers for two

individual speakers. I then sewed velcro hook material to the back of each. I can stick them into the ear-relief area of a motorcycle helmet, or to two plastic tabs I mounted on the side of my bicycle helmet in the area of my ears. The speakers don't prevent me from hearing traffic and I don't have to have the radio turned up high enough to bother other nearby bicyclists. When I use a handlebar bag or other kind of pack, I ensure that I have a second fastener to guarantee I don't part company with my radio again.



With antenna clipped to helmet and HT in his jersey pocket, Norm Huber goes on the air.

I can't wait till I get a chance to ride in some other regions of the country. It would be a real kick to do a ride across America with the radio. I'm looking forward to partial retirement so I can have the time to do things like that.

—Norm (Panama Pedaler) Huber, N9ZKS

R.R.#2 Box 152

Bloomington, IL 61704-9625

BMHA NET....ON 20

TIME: 2000 UTC and four hours later at 0000 UTC.

DATE: 1st and 3rd Sunday of each month.

FREQ: 14.253 — plus or minus the QRM.

Look for me, NF0N, at those times, and if I'm unable to call the net please look for those who have picked up the net when I've been out of town. In particular, look for Assistant Net Controls Jim Kortge, NU8N, and John Liebenrood, K7RO. Jim covers the East, John covers the West, and I cover the middle.

—Mike Nickolaus, NF0N, BMHA Net Control

316 E. 32nd St.

S. Sioux City, NE 68776

NEW MEMBERS

We're pleased to add these names to our Membership List:

Flo Adams, KC5PPL, 105 Clarks Grove Lane, Hutto TX 78634
Mike Adams, KC5IPB, " " "
Sam Blackburn, KBOTEE, 3019 Knoll Lane NW, Rochester MN 55901
Robert Britt, KE4QOB, 4504 Chestnut Rd, Signal Mtn TN 37377
Guy R Collins, W6GGP, 2750 Filbert Dr, Walnut Creek CA 94598
Francis Cookson Jr, N1VPR, 9 Davis Park, Plaistow NH 03865
Jules Corben, VK2EXT, 2/44 Herbert St, Oatley,
New South Wales 2223, **Australia**

Doug Covington, KB5VKJ, Rt 3 Box 75-3, Gainesville TX 76240
Clark O Dexter, KD1LQ, 137 Jordan Rd, Keene NH 03431
Kristin Dyer, KD6ELH, 48 Broadway, Los Gatos CA 95030
Eric Lechner, KD6HZV, " " "
Gary N Gross, KASWEL, 3425 Centenary Av, Dallas TX 75225
John Hess, KG8NR, 1403 Woodbridge Ln, Wixom MI 48393
Matthew T Insko, KB0QAZ, 242 12th Av, Manson IA 50563
James Landre, KE8TPB, POB 3535, Livermore CA 94551
Clarence Maise Jr, AB5MC, 186 Spring Valley Rd, Cabot AR 72023

William Michels, 1081 King Rd, Cheshire CT 06410
John Neves, KB6FU, 4123 Middlefield Rd, Palo Alto CA 94303
Brian R Olson, NOXFE, 3720 W 108th St, Bloomington MN 55431
Mike Pulhuj, KB8URO, 5226 Ottawa River Rd, Toledo OH 43611
Paul Rudden, N9UCE, 395 E. Elk Grove Blvd, Elk Grove Village IL 60007
Gerald Slegle, KE6SSH, 3419 Montrose Av, La Crescenta CA 91214
Walter N Smith, KB8ZQW, 304 Whitewater Dr, Harrison OH 45030
Carl Sterzinger, N2PEI, 759 1/2 Pierce Av, Niagara Falls NY 14305
Bud Strauss, NP2CT, POB 26535, St. Croix, **Virgin Islands** 00824

Doug Tracy, W8YCU, 5345 Rector, Toledo OH 43615
Chris Vail, N9TFC, 10912 Braewick Dr, Carmel IN 46033
David H Vetterlein, WA7YEO, 351 E Glen Av, #25, Auburn AL 36830
Bryan Wilkins, KB0SVS, POB 935, Monona IA 52159
Russell W Yocum, N3VQU, RR 3 Box 44, Rawlings, MD 21557
Terry Young, K4KJP, 129 Sotir St, Ft Walton Beach FL 32548
Katie Ziegweid, 2958-B No. Winstel, Tucson AZ 85718

With traditional ham friendliness, make contact with these new members, welcome them to BMHA, and help them with any problems they might have.

REMINDERS

Your Bicycle Flies For Free!

As a member of BMHA you get free transport of your bicycle, when you fly on Northwest Airlines. You save \$90 on a roundtrip flight. For details call Wild World of Travel, Missoula MT, 1-800-735-7109. Mention that you're a network member of Adventure Cycling.

Make Your Own "J" Antenna

As mentioned in the April '95 issue, Ken Wahrenbrock, KP6NC, has offered to provide detailed instructions for making his famous MOB Stainless "J" Antenna. This is the antenna used by over 40 members of the bicycling wing of the Downey (CA) ARC. Using this antenna on his bike, Ken can hit his base station when he's 100 miles from home—and using only 1.5 watts. You must specify whether you want plans for 144, 220, or 440 MHz. They're \$1 each, postpaid. Write to Ken Wahrenbrock, KP6NC, 9609 Cheddar St, Downey CA 90242. (This offer available to BMHA members only.)

BMHA NEWSLETTER

Editor: Hartley Alley, NAOA

Associate Editor:
Skip LaFetra, AA6WK

Assistant Editor:
Bil Paul, KD6JUI

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We welcome articles, suggestions, letters, announcements, photos, artwork — anything pertaining to bicycling while operating an amateur radio, or vice versa.

Submitted material will be edited for clarity and, if necessary, shortened to fit space constraints. Material should be submitted before Mar 1, June 1, Sept 1, or Dec 1 for inclusion in the ensuing issue.

BMHA NEWSLETTER, a quarterly publication of the Bicycle Mobile Hams of America — Jan, Apr, July, Oct.

TELEPHONE: 303-494-6559

BICYCLE MOBILE HAMS OF AMERICA (BMHA)
Box 4009, Boulder, CO 80306



ABOUT BMHA

For the information of our first-time readers

Bicycle Mobile Hams of America got its start when a "Stray" in the June '89 QST magazine asked to "get in touch with hams who operate their radios while bicycle-mobile, or while in any other human-powered conveyance", signed by Hartley Alley, NAOA. Twenty five hams responded, filled out questionnaires, and received a summary of the collected data.

In April of '90 we had our first BMHA Forum at the Dayton HamVention. We played to a packed house, overflowed the room, and added 54 names to our mailing list. Our five subsequent forums have drawn increasingly larger audiences, and now BMHA is established as a "regular" at this world-renowned event.

This is the twenty-first issue of our quarterly newsletter, which has become the clearing house for the exchange of info and ideas for the hams who go on the air from their bicycles. Since the last issue of this newsletter we have added 32 new members. The total membership now stands at 449, with members in 42 states, and six countries.

BMHA membership puts you in touch with a friendly and helpful group of bike-riding hams. You'll make contacts through our membership directory, packet and E-mail address lists, bi-weekly net on 20 meters, annual meeting and Forum at the Dayton HamVention and other regional meetings, and of course through the BMHA Newsletter, which has articles on bike trips, antennas, other gear, operating tips, etc. Membership application blank on the next to last page.

THE WORLD OF HF

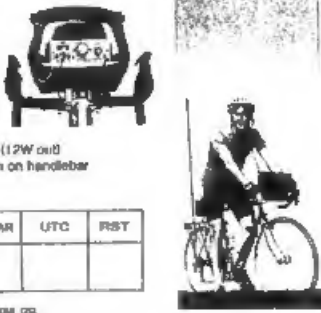
Hawaii Bike Tour Yields Many Contacts

I had a great vacation in Hawaii from March 4 to March 19. I spent 10 days on Maui and 5 days on Molokai. I bicycled 470 miles, hiked 34 miles, and spent 3 days at beaches. I carried all my gear on the bike and camped most places.

WD5FFH

Wayne Estes
727 E. Maple Ave.
Mundelein, IL 60060
U. S. A.

Antenna: 8 ft. Hamstick Vertical
Transceiver: MFJ 20 meter SSB Travel Radio (12W out)
Interface: Icom HS-10 headset, PTT switch on handlebar
Battery: 14.4V, 3 Amp-Hr Ni-Cad



Confirming 20 meter SSB contact with:	DAY	MONTH	YEAR	UTC	RST

☐ PSE QSL ☐ TRX ☐ A POWER CBL

In addition to the handlebar bag shown on the QSL card (above) I had front and rear pannier bags plus a sleeping bag and tent poles on the rear rack. Bicycling from sea level to the Haleakala campground at 7000 feet elevation is a lot of work when you're carrying 50+ pounds of gear on the bike.

The ham radio equipment weighed a total of 7 pounds:

- * MFJ 9420 SSB Travel Radio (12W output) in my handlebar bag
- * 8 ft. Hamstick mobile vertical on a homemade mount on the rack
- * 14.4V, 3 Amp-hr NiCd battery, carried in a front pannier bag
- * Icom HS-10 headset attached to my helmet
- * PTT switch on the handlebar
- * 16 ft. counterpoise wire to improve signal when stationary
- * Wall transformer that charges the battery in 5 hours

I've been on many self-contained bike tours, but this was my first time to carry ham radio equipment on a bike tour. Ham radio was only a secondary activity, but I made a total of 97 contacts with 11 DXCC countries and 11 U.S. states. I was stationary for most contacts, but I did make a few while riding the bike.

Location Contacted:	# of Contacts:
California	37
New Zealand	10
Washington	7
Canada	6
Australia	6
Japan	5
Texas	4
South Cook Islands	3
Hawaii (ground wave)	3
Oregon	3
Florida	2
Colorado	2
Christmas Island	1
Yacht NW of Christmas I.	1
Kiribati	1
French Polynesia	1
Argentina	1
Nevada	1
Illinois	1
Wisconsin	1
Arizona	1

The only place I expected to contact but didn't was Alaska. I heard several Alaska stations but never made 2-way contact. I expected to get good signals from mountain tops overlooking the ocean. But it turned out that my signals were *much* stronger when I was near the ocean.

I was lucky that my setup worked reliably for the two week bike tour. There were lots of opportunities to get broken wires in the headset, PTT switch, battery cable, charger, and coax. My 8-foot antenna got bent once but it was easy to straighten. The MFJ radio was dropped, scratched, and dented but it kept on working!

The battery lasted a long time on a charge. Once I used the radio for 4 days without charging the battery. The MFJ 9420 is great for battery operation. Receive current drain is only 80 mA with the meter light bulb disconnected.

I'm a 33 year old electrical engineer, a ham since 1977 (extra class since 1981). My bicycle is a 1987 Trek 520 touring bike which I've ridden more than 40,000 miles throughout North America, Hawaii, and New Zealand.

Hawaii bike-mobile was a lot of fun. I plan to do it again later in some other DX location. You never know where WD5FFH Bicycle-Mobile will show up next!

—Wayne Estes WD5FFH
727 E. Maple Avenue
Mundelein, Illinois 60060

Back Issues Still Available

You may purchase any of the twenty back issues of the BMHA NewsLetter for \$1.75 each, postpaid. For info on the contents of the various issues send a business-size SASE to: BMHA, POB 4009, Boulder CO 80306, and ask for the Index of Back Issues. This service available to members only.

More Notepad

Oct 20-22 — Pacifcon to Host a BMHA Forum

Neil Fullagar, KE6NCX, will lead a demonstration of bicycle-mobile VHF and HF equipment and operating techniques at the Pacifcon. The west coast's largest gathering of hams, the Pacifcon is an annual October event, situated at Concord, CA. in the San Francisco area. If you'd like to volunteer, comment, or have suggestions for the program, contact Neil Fullagar, 401 Maitland, Alameda CA 94502. Internet: nfullagar@ccgate.apl.com.

Here's a clever way to get publicity for your local bike club: Recently in Boulder, Colorado, we had 900 bike riders doing the Century at the Boulder Bicycle Classic. You say, nothing unusual about that. Right. But their special post-ride event was new to me: It's called the Paper Route Challenge. Kids and adults got to test their paper-throwing accuracy on a small course that involved riding a "delivery bike" and hitting targets with bagged newspapers. Points were scored for hitting certain targets and prizes were awarded accordingly. This side event was sponsored by the local newspaper, the *Boulder Daily Camera*. Get your local paper to help run this post-ride event at your cycling club's next Century Ride.

—Hartley Alley, NAOA, Editor

COMMENTS

....I got my Tech Plus in November. I was hoping to take a radio on WorldWander, a 26,000-mile cycling trip with 22 non-hams. But with all the bike tools and spare parts I've accumulated for the trip I don't have room for the radio, batteries, etc. As it is, my loaded bike weighs 8 lbs more than I do. But if I end up riding much slower than the others and do a lot of riding alone, I may find a shop that will get me fixed up with a two-meter system. The only country I can't get a reciprocal license in (to my knowledge) is England, which would require me to have a General license.

At any rate, I hope to become an active ham after the trip. It will start this March 1st and go through November '96.

---Liz Welder, KB5DYF, Victoria TX

....Would like to see more info on recumbents. I find my recumbent to be ultra comfortable, and the safest way to ride and talk on the radio at the same time!

---Larry Varney, KM4ZH, Cold Spring, KY

....[by packet] I usually go for a bicycle holiday in Scandinavia—this summer I plan to go to Denmark. So far I have never taken a trx with me. As a member of BMHA, however, I feel obligated to take with me an HT for either VHF or UHF. This would enable me to get in contact with local hams, who could advise me about camping sites, special events, etc. But first I have to buy an HT. I want advice as to which HT works well in Scandinavia. With that in mind, please send me the packet address of former BMHA member in Sweden, Bengt Magnusson, SM5VL. [Info sent to him by packet. —Ed.]

---Ernst-Jan Eijlers, Woerden, Netherland

....I have been cycle touring for about ten years; usually going on a self-supported tour once a year with a group of friends. I was intrigued by the article about you and your wife in the August '94 *Adventure Cyclist*, particularly the Ham Radio aspect. I started studying for my No-code Technician ticket on our tour of Cape Breton Island, Nova Scotia in Sept. and passed the test in Dec. I'd like to get myself fully-operational for

transmitting from the bike by this year's tour, so that I can impress my cycling buddies and motivate them to follow in my footsteps....

---Don Brantlick, KB2SQT, High Bridge, NJ

....Currently using a Hustler collinear 2-m antenna off the rear rack, attached with a mirror mount. The HT is either an Icom 2AT or an O2AT. The mic situation varies from a hand-held speaker/mike to a headset. The speaker/mike is cumbersome and the headset doesn't fit right under my helmet. I tried the CT-221 ear mic and ended up sending it back as it didn't work with either radio. I would like to find an ear mic that works properly -- hopefully, some other riders have found the solution.

....The primary use of my bike is commuting 10 miles one way to work, when the temperature returns to the below 100 mark.

---Jim Bassett, KA1FPP/7, Las Vegas, NV

....I'll be riding 60 miles this Saturday on the Tour de Sewer, a 15, 30, or 60-mile ride in the Whittier, Calif., area. There will be about 30 hams manning spots along the ride or driving sag wagons. Ten to fifteen of our ham club's MOB (Mobiles on Bikes) riders will be tracking the routes and doing sweep.

---Ken Wahrenbrock, KF6NC, Downey CA

....Thanks for the sample newsletter and other info. Most of it was still Greek to me, but my ham husband enjoyed looking through it. I decided to join your organization even though I'm not yet a licensed ham. I look forward to the newsletter. I've signed up for a crash course test to be held October 21. Hopefully I'll be able to write you the next week with my new call sign. My husband has his Tech license---KC5HO. (I hope my call is easier to say!)

---Gail Lohre, Garland TX

....Have enjoyed the back issues that you sent me. I use a Realistic HTX-202 2-meter rig with an AEA Hot Rod antenna clipped to my rear bags. In addition to experimenting with a PVC portable quad for some upcoming tours, I'm going to construct a J-pole. I plan on going on a bicycle tour of Ireland within the next year and hope to be on the air during the trip.

---Paul Rudden, N9UCE, Elk Grove Village IL

Membership Application

MemAPPL3.wpd 7-25-95 lpc /newmem /pac /E-mail /newHAM /NONham /news /Q's /rest /walc /arw
BICYCLE MOBILE HAMS OF AMERICA
Box 4009, Boulder, CO 80306

Individual \$10 _____ new member? _____ renewal? _____
(US or Canada)

Family \$15 _____ Foreign \$15 _____ Donation \$ _____
(limit: two persons)

Make check payable to BMHA, in US dollars or international money order.

Name _____ Call _____

Address _____ License Class _____

City _____ State _____ Zip _____

Age _____ Most miles bicycled in one day _____

BMHA's Official Logo

The next time you need to order new QSL cards, don't forget to include the BMHA logo in your design. Here's the official logo, as designed by Russ Dwarshuis, KB8U.

BICYCLE MOBILE



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BICYCLE MOBILE



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HOME-BREW PROJECTS

Two-Meter Loop Antenna from a Bike Rim

by Steve Putman, N8ZR

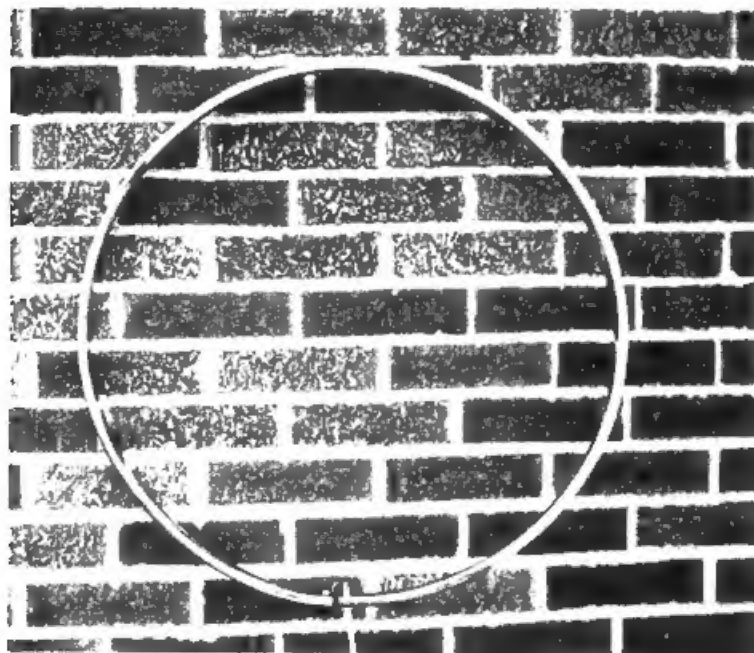
(Reprinted from the RF-Carrier,

the newsletter of the Dayton Amateur Radio Assn.

This idea was sent to us by Herb Perrine, WD8DLQ.)

What can you do with a beat-up rim?

I had a couple of 27-inch bicycle rims which were bent just enough that the caliper brakes would not work properly. I realized that a 27-inch bike rim is a full wavelength on 2 meters. A check of the ARRL Antenna Handbook confirmed this, plus a couple of other pertinent facts: It has a radiation resistance of about 100 ohms, and is bi-directional with about 2 db of gain over a half-wave dipole.



Procedure

I cut through the rim and fed it directly with RG-59B. The center wire is screwed to one side of the cut in a spoke hole. The shield is screwed to the other side of the cut in another spoke hole. The SWR meter borrowed from WA8OHI showed the SWR across the 2-meter band stayed below 1.5.

Comments

Rotating the loop so that the feedpoint is at the top or bottom results in horizontal polarization. Vertical polarization results when the feedpoint is at the side.

Beamwidth is very wide with sharp nulls in the plane of the bike rim. It seems most effective to put an undesired signal source in a null, and communicate with everybody else.

Signal reports have been the best of any antenna I can fit in my apartment. Performance seems pretty good on the 3/4-meter band, which is reasonable for it being the third harmonic of the 2-meter band. Reception is very good on the NOAA weather broadcasts, aircraft band, and FM broadcast stations.

When listening to amateur communications from earth orbit, orient the bike rim with maximum directivity north-south.

When listening to amateur communications from earth orbit, orient the bike rim with maximum directivity north-south. This way the signal source will pass through the null so quickly that you will not hear it.

The bike rim is sufficiently rigid, so that no means of support is necessary to hold the shape. Mine hangs on a nail in the wall, with the coax hanging straight down to the transceiver. It may seem too simple, but it works great!

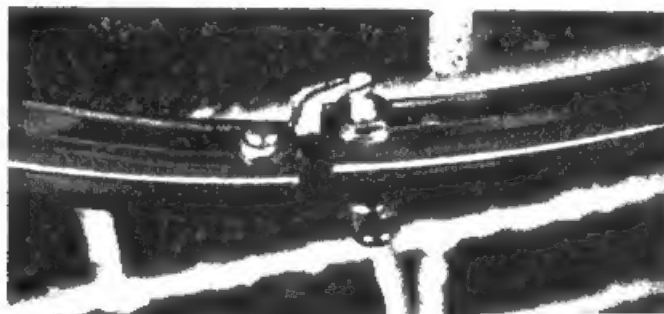
(We decided to put this idea to the test: We put in a call to Bob Pulhuj, KE8ZJ, from Toledo, Ohio—and BMHA's longtime Home-Brew Meister. We asked him to build one of these bike rim antennas and put it to a test. Bob writes:)

Here are my comments:

A 27" bicycle rim is actually 25" in diameter—for those of you who were to calculate two 2-meter wave lengths.

After taking all the spokes out, I cut a 1/4" slice out of the rim, to allow for an air gap. I used a BNC chassis connector to make maneuvering the antenna easier. Start by drilling a 3/8" hole in the center of the rim from the outside, where the tube sets. The rim is not that wide at that point, so centering the "pilot" hole carefully will allow the BNC connector to sit in that narrow area. (After I did the above, I realized that if I had cut the rim 3/4" from the valve stem hole, which is centered and already fairly large, this would make it easier to mount the BNC connector.)

The next step is to drill a hole across the air gap for a #8 screw to make the center lead connection of the BNC connector, as the picture (below) shows. Use #14, or so, solid copper wire, to give it mechanical rigidity, so as to maintain the air gap of 1/4".



Photos by Bob Pulhuj, KE8ZJ

Performance notes:

The antenna performed very well, just as Steve Putman said it would in his original article.

Hanging it in the shack is easily accomplished by using fishing line. As for using it while bicycle-mobile, maybe you could mount it on a fiberglass pole! I'm kidding.

Good luck on home-brewing this one. The real fun is when you go into a bike shop and ask for a junk/bad rim. Just don't explain what you're going to use it for. I know, the looks you'll get! Just take the rim and run!

---Bob Pulhuj, KE8ZJ

5226 Ottawa River Rd
Toledo, OH 43611